

REMARKS

Claims 1-30 are pending in the present application. Claims 1, 4, 8, 18, 24-26 and 30 have been amended. Claims 9-15, 17, 20 and 29 have been withdrawn.

Priority Under 35 U.S.C. 119

Applicants note the Examiner's acknowledgment of the Claim for Priority under 35 U.S.C. 119, and receipt of the certified copy of the priority document.

Drawings

Applicants note the Examiner's acceptance of the drawings as filed along with the present application on February 11, 2004.

Claim Rejections-35 U.S.C. 102

Claims 1-3, 7, 16, 21, 23, 27, 28 and 30 have been rejected under 35 U.S.C. 102(a/e) as being anticipated by the Tamura et al. reference (U.S. Patent Application Publication No. 2002/0041193). This rejection, insofar as it may pertain to the presently pending claims, is traversed for the following reasons.

The signal transmission apparatus of claim 1 includes in combination among other features a power-ground transmission line pair "for supplying power to the first driver, having a characteristic impedance less than a sum of the on-resistance of the first driver and the characteristic impedance of the signal transmission line, the power-

ground transmission line pair including a power line and a ground line, the power line and the ground line running adjacent to each other". Applicants respectfully submit that the Tamura et al. reference as relied upon by the Examiner does not disclose these features.

The Examiner has interpreted Vdd and Vss lines in Fig. 4 of the Tamura et al. reference together as the power-ground transmission line pair of claim 1. However, the Tamura et al. reference does not disclose or suggest that Vdd and Vss lines in Fig. 4 run adjacent to each other, as would be necessary to meet the features of claim 1. Moreover, there is no teaching in the Tamura et al. reference that the characteristic impedance of Vdd and Vss lines are less than a sum of the on-resistance of a first driver and a characteristic impedance of a signal transmission line, as would be necessary to meet the still further features of claim 1. Specifically, paragraphs [0087] through to [0091] do not describe characteristic impedance of a power-ground transmission line pair having a characteristic impedance less than a sum of an on-resistance of a first driver and a characteristic impedance of a signal transmission line. Applicants respectfully submit that the signal transmission apparatus of claim 1 distinguishes over the Tamura et al. reference as relied upon by the Examiner, and that this rejection, insofar as it may pertain to claims 1-3, 7, 16, 21, 23, 27, 28 and 30, is improper for at least these reasons.

With regard to claim 2, the Examiner has asserted that the transmission lines of the Tamura et al. reference are inherently made of metal in order for current to conduct.

However, in large scale integrated circuits, gate electrodes of transistors are commonly made of polycrystalline silicon, which is not metal. Moreover, in memory circuits column lines that drive transistor gates of memory cells are also generally made of polysilicon. The Tamura et al. reference does not describe that all signal-line elements and a signal transmission line are metallic in Fig.4. The word "metal" does not appear in the description of Fig. 4 in the Tamura et al. reference. Applicants therefore respectfully submit that claim 2 distinguishes over the Tamura et al. reference as relied upon by the Examiner for at least these additional reasons.

Regarding claim 23, the Examiner has asserted that the signal transmission line of the Tamura et al. reference is a stacked-pair transmission line. However, the line coupled to decision circuit 1105 in Figs. 3 and 4 of the Tamura et al. reference is not disclosed, illustrated or described as a stacked-pair transmission line. Incidentally, Applicants note that a stacked-pair transmission line would be understood as a pair of transmission lines running one above the other. Clearly, the Tamura et al. reference does not disclose or suggest these features. Applicants therefore respectfully submit that claim 23 distinguishes over the Tamura et al. reference as relied upon by the Examiner for at least these additional reasons.

The interconnection structure of claim 30 includes in combination among other features a directional coupler "connected to the transmitting end or the receiving end of the signal transmission line, for blocking a direct-current component of the digital signal and passing a wideband alternating-current component of the digital signal, the

directional coupler includes an energy input line pair and an energy transmitting line pair disposed in close proximity in materials of different dielectric constants".

The Examiner has interpreted hold capacitor 1044 in Fig. 4 of the Tamura et al. reference as the directional coupler of the claims. However, hold capacitor 1044 in Fig. 4 of the Tamura et al. reference is not described or even remotely suggested as including an energy input line pair and an energy transmitting line pair disposed in close proximity in materials of different dielectric constants, as would be necessary to meet the features of claim 30. Applicants therefore respectfully submit that the interconnection structure of claim 30 distinguishes over the Tamura et al. reference as relied upon by the Examiner, and that this rejection, insofar as it may pertain to claim 30, is improper for at least these reasons.

Claim Rejections-35 U.S.C. 103

Claim 22 has been rejected under 35 U.S.C. 103(a) as being anticipated by the Tamura et al. reference in view of the DiBene, II reference (U.S. Patent Application Publication No. 2002/0063269). Applicants respectfully submit that the DiBene, II reference as secondarily relied upon does not overcome the above noted deficiencies of the primarily relied upon Tamura et al. reference. Applicants therefore respectfully submit that the signal transmission apparatus of claim 22 would not have been obvious in view of the prior art as relied upon by the Examiner taken singularly or together, and that this rejection of claim 22 is improper for at least these reasons.

Allowable Subject Matter

Applicants respectfully note the Examiner's acknowledgment that claims 4-6, 8, 18, 19 and 24-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Responsive to the acknowledgment of allowable subject matter, claims 4, 8, 18 and 24-26 have been respectively amended to be in independent form, merely to advance prosecution of this application. The Examiner is therefore respectfully requested to acknowledge that claims 4-6, 8, 18, 19 and 24-26 are allowed.

Withdrawn Claims

The Examiner is respectfully requested to rejoin and examine claims 9-15, 17, 20 and 29, which should be allowable at least by virtue of dependency upon claim 1. Rejoinder of these claims should not be an undue burden.

Conclusion

As noted above, claims 4, 8, 18 and 24-26 have been respectively amended to be in independent form, rather than to further distinguish over the relied upon prior art. That is, claims 4, 8, 18 and 24-26 as currently pending have the same scope as originally presented. Thus, the amendments to claims 4, 8, 18 and 24-26 should not be construed as narrowing scope within the meaning of *Festo*.

The Examiner is respectfully requested to reconsider and withdraw the

corresponding rejections, and to pass the claims of the present application to issue, for at least the above reasons.

In the event that there are any outstanding matters remaining in the present application, please contact Andrew J. Telesz, Jr. (Reg. No. 33,581) at (571) 283-0720 in the Washington, D.C. area, to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment for any additional fees that may be required, or credit any overpayment, to Deposit Account No. 50-0238.

Respectfully submitted,

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